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ABSTRACT

Cooperative education involves on-campus instruction and off-campus work experience. These programs can be referred to as work study, field work, or work experience. The student has the advantage of applying his knowledge in a work situation; the college gains financial benefits; and the employer has the opportunity to influence the student to choose his business as a career. Various methods include: (1) alternating a full term in school with a full term on the job; (2) work experience paralleling enrollment in regular college classes; (3) one term on the job as an initial step into expanded types of cooperative programs; and (4) working full time while attending class part time in order to update work skills for career improvement. An employer's responsibilities are: planning a cooperative program; employing students; and orientation, supervision, and evaluation of student performances. Program implementation involves: organization and staffing, grading, fees, student transcripts, co-operative handbook, and program promotion. Cooperative education programs have a potential effect on new methods of instruction, career-step systems, new field experiences, "outreach" systems, and international involvement. Problems and possible solutions are discussed. Examples of programs are offered in merchandising management, manufacturing industry, and retail management training. (CA)

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COOPERATIVE EDUCATION

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JC 710 211

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PREFACE

This publication was developed by the Occupational Education Project of the American Association of Junior Colleges, with the assistance of the W. K. Kellogg Foundation. The project reflects the Association's deep interest in providing guidance to junior colleges in their development of occupational curriculums.

The concepts of cooperative education are not new to the nation's junior colleges. Many programs exist which include the principle agents (student, college, employer) coordinating their efforts to provide a more meaningful education. With few exceptions, these programs receive the enthusiastic support of all parties involved. They may be called work experience, work study, field study, or may not carry any identifying label at all.

In order to provide a better understanding of this vital technique, and to promote its more extensive use, the Occupational Education Project appointed a national advisory committee made up of people from business and industry, junior colleges and senior colleges, to develop these guidelines. Each member of the committee has had years of successful experience with cooperative education at the junior college level.

In their deliberations, the committee endorsed the concepts of cooperative education for the liberal arts curriculum. But in deference to conciseness and space, they have limited this publication to occupational programs.

Gilbert D. Saunders

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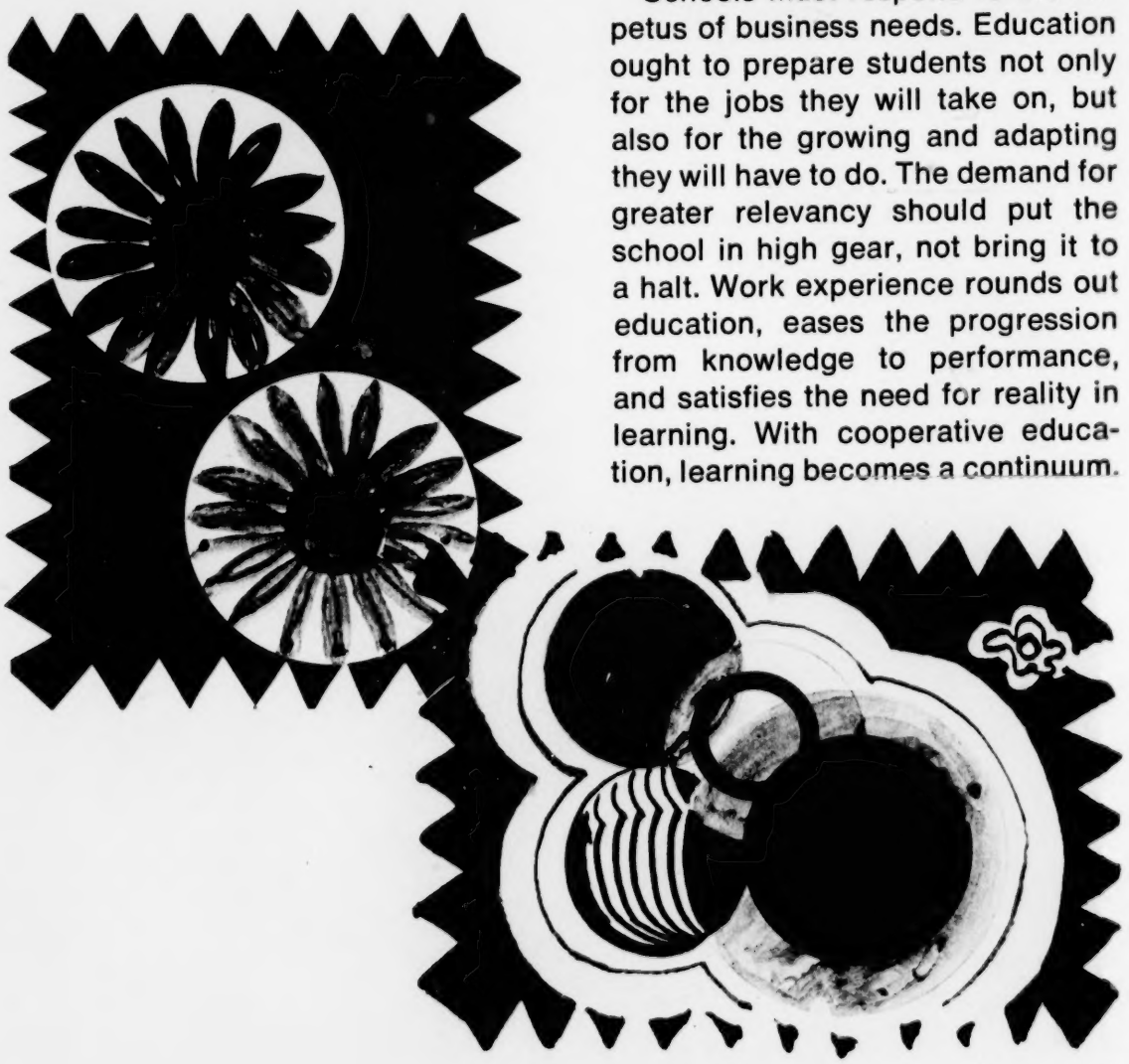
INTRODUCTION

Cooperative education is the association of a cooperating employer and a cooperating college merging their resources to better prepare people for meaningful vocations and significant roles in society. Through the cooperative process, students spend part of their college life in on-the-job training assignments. In this way, the business and service communities become an integral part of the college campus.[1]

The employing and educational communities are like two interlocking wheels: the motion of one causes the movement of the other. Employers need well educated, highly motivated, appropriately trained workers. They have the responsibility of helping the college prepare their future employees properly. When the employer moves to do his part, the school is empowered to turn out not only good students, but good employees.

Schools must respond to the impetus of business needs. Education ought to prepare students not only for the jobs they will take on, but also for the growing and adapting they will have to do. The demand for greater relevancy should put the school in high gear, not bring it to a halt. Work experience rounds out education, eases the progression from knowledge to performance, and satisfies the need for reality in learning. With cooperative education, learning becomes a continuum.



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ADVANTAGES OF COOPERATIVE EDUCATION 1

Cooperative education involves a mutual relationship between the student, the employer, and the college. Experience and studies suggest quite clearly that all three parties in this relationship benefit from the association.

ADVANTAGES TO THE STUDENT

The student has the opportunity to apply his knowledge in a practical work situation. He can raise questions that get discussed and answered in the classroom. Cooperative education bridges the gap between the theoretical and the actual, and keeps the student's perceptions realistic. Through work experience, the student has the opportunity to test his interest in, and suitability for, the occupation he is learning. He is exposed to work methods not taught in the classroom, and has access to equipment not normally available in the college laboratory. He obtains direction and orientation in preparation for the ever changing needs of industry, government, and service agencies. He makes the transition from school to work gradually under the skilled guidance of a coordinator, giving him time to comprehend the significance of the learning situation and the world of work. While cooperative education is essentially an education program, the student nevertheless begins earning the means for paying his own way and understanding what it takes to manage his own money and time in a productive manner. He can gain a sense of community, and an awareness of personal and community responsibilities. Studies indicate that the student's motivation to study is stronger, his ability to get along with people more sure. He is better oriented to the world of work and he has solid contacts for later occupational placement.[2] After job placement, those who have participated in cooperative education typically exhibit more job stability and satisfaction than other students.

ADVANTAGES TO THE COLLEGE

The financial benefits reaped by the college are many. The equipment necessary for some curriculums (particularly technical ones) is very costly. By working outside the school, students are able to use the best equipment without the college incurring the cost. Because co-op students earn salaries while they are working, financial aid resources are freed for use by other students. The school's physical plant can be utilized throughout the year since some co-op students will be in the classroom during the summer term. Courses can be scheduled during the entire year.

Cooperative education provides students with a superior education. Existing programs almost always benefit from the addition of the cooperative dimension. Faculty are spurred on to better efforts, for their students have knowledge of the latest techniques, and they must keep up with developments. Co-op students bring new excitement and experience to the classroom.

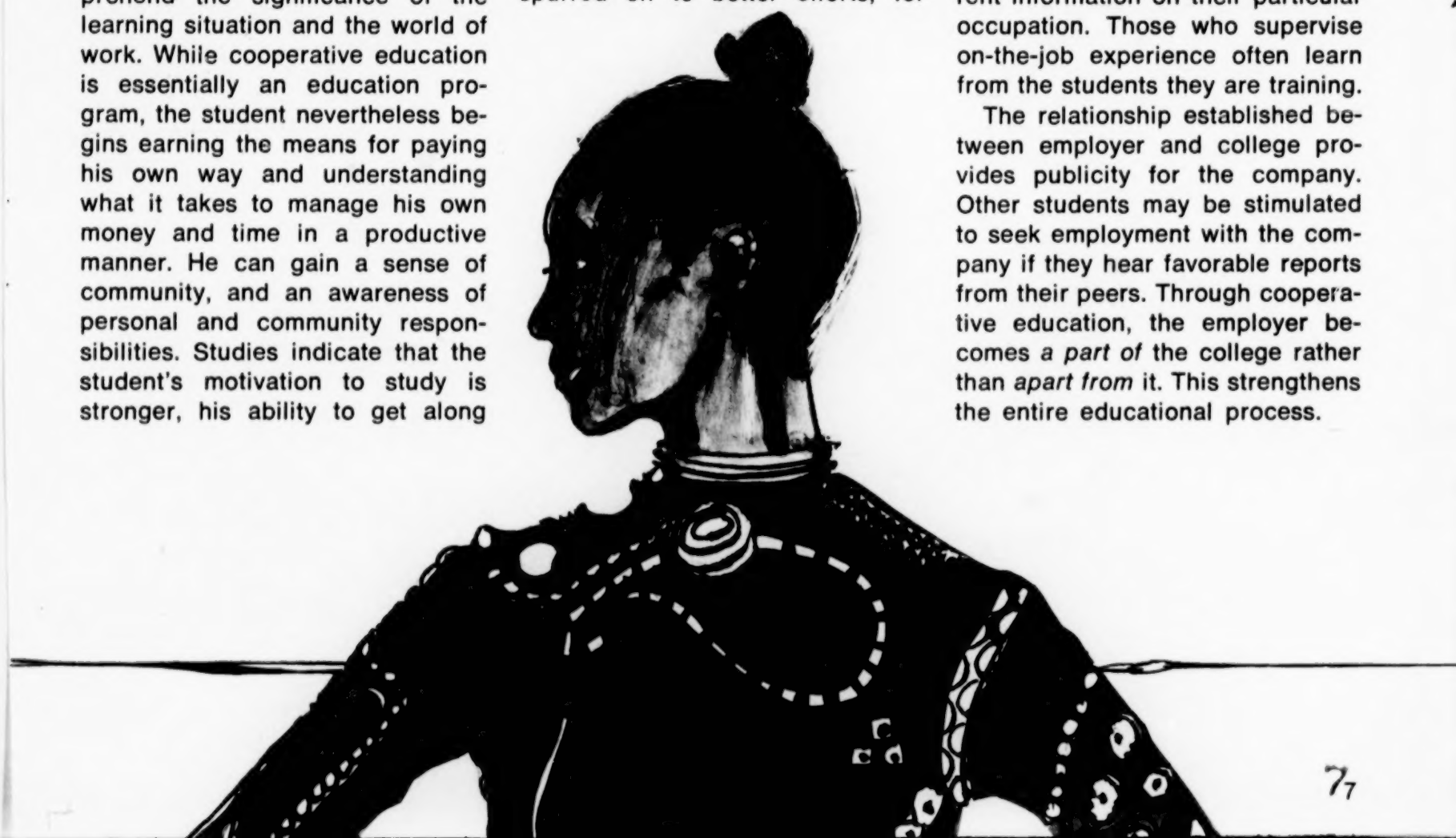
This dual education more fully guarantees industry's satisfaction with the college's preparation of students. Work study is a forceful public relations instrument. It possesses the power to reduce the communications gap between the college, community, and student.

ADVANTAGES TO THE EMPLOYER

The employer has the opportunity to influence students to choose his particular business or industry as a career. Often a student's exploratory experience will turn into a career commitment. The employer can look over prospective permanent employees and see who the most qualified people are. A large percentage of co-op students remain with their employer after graduation.

Co-op students have a positive effect on the productivity of their co-workers. They are highly motivated and career oriented. They will be the people with the most current information on their particular occupation. Those who supervise on-the-job experience often learn from the students they are training.

The relationship established between employer and college provides publicity for the company. Other students may be stimulated to seek employment with the company if they hear favorable reports from their peers. Through cooperative education, the employer becomes *a part of* the college rather than *apart from* it. This strengthens the entire educational process.



MODELS FOR COOPERATIVE EDUCATION 2

METHODS

A series of discussion models is provided at this point to illustrate the process of cooperative education. These examples are designed to stimulate creative planning; they are presented briefly without detailed description. The purpose here is not to rate one plan against another, but rather to offer a variety of methods for arranging classroom study and off-campus work experience to provide new learning opportunities for community college students.

Although many plans and combinations are possible, each plan contains one essential, common element: educational coordination between on-campus instruction and off-campus experience.

1. ALTERNATE TERM

One widely accepted college plan, the alternate term arrangement, provides students with the opportunity to spend a full term in school and the following term on the job. Two students hold one full-time work station in business or industry. While one is in college, the other is working. This continuous, year-round cycle allows each student to complete a four-year college program in five years. An associate degree in applied science or arts can be completed in two or two and one-half years.

Figure 1 indicates that each individual has two quarters (six months) on-the-job experience along with his six quarters of classroom activity. This method seems to work particularly well since the industry can be assured of maintaining the same positions over a period of time without having to increase or decrease the numbers of positions to satisfy programs extending over a two-year period.

Figure 2 pre-supposes that during the spring term of each year there are enough available co-op jobs to furnish the students with employment.

Leading educators in the field agree that cooperative education programs of all types are most effective for students when the work periods are of lengthy duration. Early experiments at the University of Cincinnati and Antioch College used alternate periods of one work week combined with one week of study. Later, the work and study periods were extended to six weeks and finally to the quarter or semester alternation.

Experience shows that intensive student involvement in the work phase of the curriculum is more likely when the time element is extended. Students require time to become acquainted with people on the job. Routine procedures need to be assimilated, supervisor relationships have to be established. All of this activity, a new learning dimension for students, requires time. Those institutions using the alternate plan have tended to adopt the full semester or quarter-length periods of time as most satisfactory.

Work experience and career exploration opportunities are virtually unlimited with such a curriculum design. A pair of students can maintain a continuous work station in almost any geographic location. Business and technical students are afforded unusual possibilities for direct involvement in work situations which may have great impact

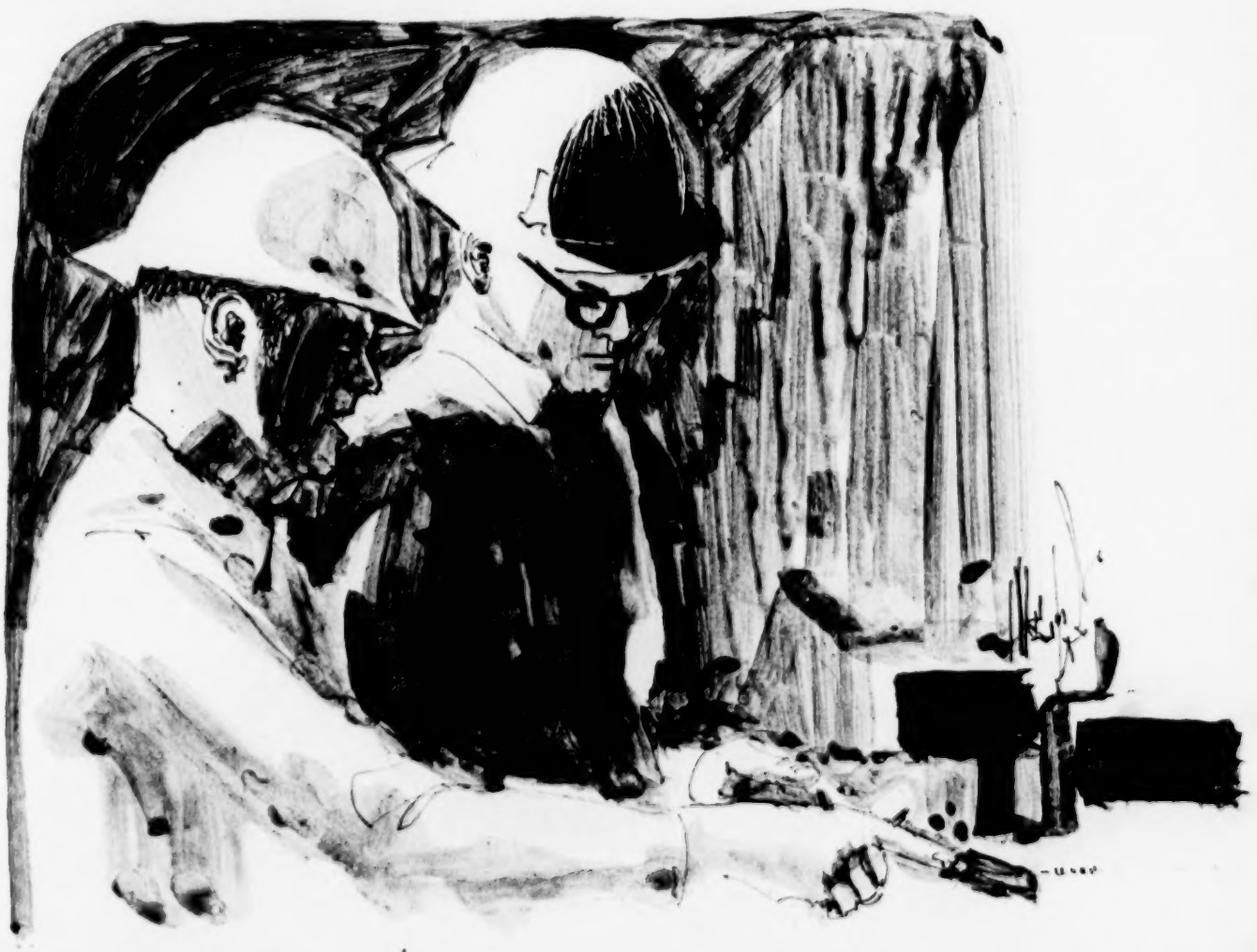


Figure 1

COOPERATIVE EDUCATION SCHEDULE BY QUARTER SYSTEM

	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
Student A	Study	Study		Study		Study	Study	Study				
Student B	Study	Study	Study		Study		Study	Study				
Student C					Study	Study		Study		Study	Study	Study
Student D					Study	Study	Study		Study		Study	Study

Figure 2

COOPERATIVE EDUCATION SCHEDULE BY SEMESTERS

	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer
Student A	Study		Study		Study	Study			
Student B	Study	Study		Study		Study			
Student C				Study		Study		Study	Study
Student D				Study	Study		Study		Study

on their future careers. One airline has considered flying community college cooperative education students overseas for their technical job assignments on a semester alternation basis. Liberal arts students have the opportunity to participate in a wide variety of experiences throughout the nation and now work in federal, state, and local government operations. Most business, industrial, and civil agencies prefer the alternate semester plan. However, there are other successful plans.

2. PARALLEL PLAN

A second pattern of work experience education is organized so that the student's work experience is parallel or concurrent with enrollment in regular college classes. Normally, the student would spend approximately one-half day in school and the other half-day in the working situation in business or industry. The hours of work may be scheduled for morning, afternoon, or evening and may vary from 15 to 40 hours per week. The class load would vary accordingly.

On the half-time arrangement, the employer may continuously cover one full-time job with two half-time students, or he may employ part-time co-op students on a schedule that meets the normal needs of business.

This pattern has certain advantages. Students enjoy an uninterrupted program of college study. They maintain their academic, social, and student body relationships. The information gained in class and at work can be immediately interrelated, and mutually supportive. Both school and work turn more smoothly through this interaction.

3. ONE TERM ONLY

A potentially useful plan of cooperative education is one that utilizes a single term of employment. If clearly correlated with classroom instruction, and not considered only summer employment, this plan can be useful as an initial step into expanded types of cooperative programs.

4. IMPROVED CAREERS

The improved career approach is of particular benefit to students who are working full time and who attend class part time. This program requires good cooperation between the college and industry. It can be effectively used by students attending evening college while holding a full-time job during the day. These students are seeking to update and upgrade their work skills so that they may obtain advancement or job variation. The basic principle in this type of work study remains educational growth through parallel involvement in college studies and field experience.

Through coordinated work and study, students can increase their employer's awareness of their educational progress. Supervisors are alerted to the fact that work-study employees are attending college for the purpose of advancement on the job. As a result, special consideration may be given to co-op workers who have shown initiative and development.

Students attracted to this program may have specific, short-range objectives other than the degree program identified by the college, and educators need to be aware of this possibility. The exact relationship between formal classroom study and work experience needs to be clearly established. Reasonable, on-the-job experience, as well as suitable study arrangements have to be developed with employers. This can prove to be difficult since the employer may be reluctant to move the individual

from his established job. Students on this plan may hold night shift jobs to attend daytime college classes not available during the evenings.

Improved career programs will be helping employees deal with the increasingly complex labor market. This type of program can be tailored to meet special individual employment needs.

MODELS OF EXISTING PROGRAMS

Merchandising Management Model. A solution to three merchandising management educational problems was proposed recently by the regional administrator of a major chain store. He suggested a revised cooperative training program aimed toward (1) solving the problem of seasonal reduction of sales staff after the Christmas rush season, (2) increasing the usually low enrollments in community college business departments during spring semester, and (3) attracting young people into the sales and marketing fields.

The cooperative education model he proposed aims to recruit interested young people during their senior year of high school—particularly those in work experience business training programs. These students, who have already demonstrated interest in merchandising would be employed for the summer through regular training procedures—with the added option of working on a reduced study schedule through fall semester, and the Christmas season through January. During this introductory period, they would enroll in community college cooperative education with an adjusted volume of subjects. Early involvement after high school assures the student a head start in the process of college study, and an improved position through experience in the merchandising field.

In February, after the rush season, students would enroll in a full spring semester program of college studies. If any work experience is to be continued through spring semester, it is minimal. Normally, under this arrangement, the student gains the best advantages of full cooperative involvement in college as well as significant responsibility on the job, combining the favorable features of each. Alternation of pairs of students is not required. The three long-standing problems of recruiting competent employees, staff training during high volume seasons, and increasing college spring enrollments, are alleviated through the merchandising cooperative plan.

Retail Management Training Model. A department store in the central city has 17 branch stores in suburban areas. Job training would be for a department manager who would supervise selling in a group of related departments (such as ladies sportswear, menswear, or housewares and appliances). The company has over 600 department managers in all. The work schedule would be part time. Students would work 3 nights (5:40 to 9:40 P.M.) and 8 hours on Saturday, a total of 20 hours a week.

Because of the need to develop a source of people to fill department manager positions, a formal written program was established through the cooperative efforts of the staff of the state community colleges and the store's central personnel. All stores participate in the program which is currently established at 19 community colleges within the state.

Participating junior colleges offer a merchandising management program acceptable to the company. The curriculum includes basic business courses in communications, mathematics, economics, merchandising and salesmanship, and most important, a course in supervision. The college designates a staff person to be the program coordinator. He refers qualified student candidates to the store's personnel director, and follows up on their progress.

Trainees are first placed in selling. They are rotated approximately every three months so they have three or four assignments in various departments that represent different types of merchandise such as home furnishings, ready-to-wear, and fashion accessories. Students are also given assignments, and attend the in-store department manager training course, if it is compatible with their school schedule. Trainees normally work 20 hours per week. With the approval of the college, their hours may be increased during vacation periods or decreased during examination periods with the approval of the store personnel director. Students may attend summer school or work full time.

The student's performance in school and on the job is frequently evaluated. A trainee may be removed from the job if he does not maintain a "C" grade average in his college work or if his job performance is unsatisfactory. The trainee is evaluated after each job assignment and the evaluations are shared with the college coordinator. Every six months, a more complete review of the student's work is made and he is interviewed by the store personnel director. In addition to discussing with the trainee how he is doing, the conference gives the student an opportunity to talk about his development. The store general manager also meets and confers with the student regarding his progress and future goals.

Trainees are subject to the regular periodic review program of the company with salary increases given on the basis of job performance. They are regular employees and receive all company benefits.

Trainees, who become department managers after completion of the co-op program, and show potential for executive management positions such as buyer or merchandise manager, are given additional company-planned executive training involving both classroom instruction and developmental job assignments.

Manufacturing Industry Model. Heavy industry is leaning more and more toward filling technical positions with qualified two-year graduates possessing backgrounds in mechanical engineering, electrical engineering, industrial engineering, computer science, math, and man-

agement. The fact that the junior college graduate (and in particular the cooperative junior college graduate) has done well in these areas has led to increased opportunities.

Heavy industry in this particular model prefers to have the cooperative student for a minimum of two work periods, on an alternating basis with his formal academic training periods. This gives the student the opportunity to become knowledgeable about more than one area and also to apply what he has learned from the practical situation to the theory he will learn in college. It also provides him with the opportunity to apply theory to the practical aspects of industry.

The work performed by the junior college cooperative student during his work period is not unlike that performed by his four-year cooperative counterpart. For instance, a mechanical engineer or a mechanical engineering technician will become involved with such things as machine repair, machine design, testing, test analysis, test evaluation, and to some degree, product design.

In this particular company, cooperative arrangements are made through regular recruiting efforts carried on at cooperating colleges by representatives from the operating plants and divisions. Thus, the selection is made from among the college ranks rather than through a pre-selection process while the prospective student is in high school. By using this approach, the college or university determines who is interested in cooperative education and who will be the people most likely to succeed in this type of learning environment.

The regular entry level positions for both the junior college cooperative student and the four- or five-year full degree cooperative student are just about the same. The difference from that point on is one of management philosophy. The four- or five-year cooperative student will use this entry level position as a training ground for other positions in which he would advance in normal sequence. An example would be going from test engineering into design and development, and then into advanced design development and research. The junior college cooperative graduate would start in the test area and stay there, advancing through the organizational structure of that particular area or of one closely related to it.

The evaluation of the cooperative student is handled by the cooperative administrator (the student's direct supervisor), the campus coordinator, and the student himself. It can occur both formally and informally, and might include regularly spaced reports, casual observation, student counseling, visits by the coordinator to the work location, and technical assistance from other engineers or supervisors in the area. Evaluations help determine whether or not an individual will be offered a permanent position with the company. If an arrangement is unsatisfactory, it can be terminated by any of the parties at the end of a given work period.

In a typical work period which could last anywhere from six weeks to five months, depending upon the college, a mechanical engineering technician would become involved in the following way. The student would be assigned to the research engineering area and would be assisting a staff engineer on various projects in experimental engineering. This area is no less sophisticated, nor are the projects any less valid or critical, because of the presence of a cooperative student. The student is called upon not only to lend assistance to these projects, but also to help develop innovative tests and validation procedures.

Experimental engineering is broken down into the following categories:

1. Durability Tests. This is an area where the entire unit or product is tested beyond its limits; typically this would involve the use of sophisticated equipment like dynamometers.
2. Component Tests. In this area, the cooperative student would become involved with testing of individual components such as fuel pumps, blowers, pistons, blocks, cranks, and camshafts.
3. Instrumentation. In this area the individual will become involved in measuring, evaluating, and determining the relevance and the validity of various forms of test results through the use of instrumentation. This can be anything from the calibration of fuel consumption to the use of stress and strain gauges to determine wear, shock, torque, and other forces imposed on the product.

The company would prefer two students to alternate on a single job so that it might be covered for the entire year. Because most of its divisions have had a cooperative program for some time, they are relatively well established and are able to advise students on housing; financing items such as food, clothing, and equipment; local entertainment; and the best ways to negotiate the area in which they are located. Most co-op students are compensated on an hourly basis, and are paid at the end of every work week. Hopefully this will soon change, and all cooperative students will be on a salaried basis.

In this company, there are 175 community college cooperative students participating in many types of work. The company appreciates the value of these people, and over the last two years has increased their number by almost 100 per cent.

EMPLOYER RESPONSIBILITIES

3

Involvement implies responsibility. The employer is responsible for: planning a co-op program; employing students; orientation; supervision; and evaluation of student performance.

PLANNING

■ Have a planned training program that is coordinated as closely as possible with classroom instruction. Audit to see that the program is working as planned.

■ Develop a pay schedule that coincides with the student's advancement, and keep him informed.

■ Appoint a member of the organization to assume full responsibility for the overall direction.

■ Serve on a college advisory committee composed of other knowledgeable employers using co-op students in the area concerned.

THE EMPLOYMENT PROCESS

■ Inform the college of the type of student needed, the minimum qualifications he should have, the salary he will be paid, and the type of training program.

■ In addition to students referred by the college, recruit co-op students through normal employment channels. Identify applicants who are potential candidates and work with the college to secure their enrollment in a cooperative program.

Select cooperative students carefully, keeping in mind the qualifications of a successful person. Be sure you see in the student the qualities that indicate he has the potential to fill the job for which you are training him. Use objective selection procedures, such as tests that give insight into aptitudes and potential.

Give cooperative students a special "trainee" status so they are singled out from others in entry level jobs. Cooperative students should receive company benefits.

Plan the student's work schedule to coincide with the natural needs of the business or industry. Students should be placed in jobs for which employees would ordinarily be hired. This prevents the possibil-

ity of having to curtail the number of students, or their hours worked, at times when business or industrial activity decrease. It is *essential* that the company maintain the student's working schedule on a long-term basis. Their ability to do so should be a determining factor in deciding whether a part-time/half-time, or semester-on/semester-off basis is the best work schedule.

ORIENTATION

Inform management, supervisors, and personnel staff of the cooperative program. Describe its benefits, how it is to function, and each person's specific responsibilities.

Inform the student that the contact official is the appropriate person with whom to discuss the strengths and weaknesses of the program. The contact official should assume the role of on-the-job counselor and advisor.

Give the student complete information about the employer's organization, the area or public the employer serves, as well as the specifics of the group to which the student is assigned and its place in the total organization.

STUDENT SUPERVISION

Determine who are the best trainers among your supervisors, and place cooperative students with them. Inform the trainer of his responsibilities regarding students before placing them in the department. Acquaint the supervisor with the objective of the co-op program so he will assign appropriate duties.

Arrange periodic group meetings of cooperative students with the top management of the company. This will exhibit management's interest in their trainees, and will provide management personnel with an opportunity to generate enthusiasm for the company. These meetings stimulate students, because they can ask questions of top management people, and it is a proof of their special status.

Maintain a close working relationship with the college coordinator of the program, and keep him informed of each student's progress on the job. Let him know if there are any problems so that he can work to solve them.

STUDENT EVALUATION

Review and interview trainees on a regular and frequent schedule so they will have feedback on their performance. Reviews also provide a basis for informing the college about how the trainee is doing.

Keep written job progress records on each trainee. These should show each job assignment, the results of personnel reviews, as well as interview comments. Initially, school background and any previous employment should be entered on the record; additions are made as the trainee progresses. Progress records should continue until the trainee is placed in a full-time supervisory or technical position.

ORGANIZATION AND STAFFING

4

Cooperative education programs are only as good as the time, effort, and dedication poured into them. A vigorous commitment with a strong organization are essentials for success. This section sets out some of the factors that will lead to a successful program.

ADMINISTRATION

Program administration is crucial to a successful cooperative education program. Without unified leadership, no program is likely to work. The question of "where" such a program should be lodged, in terms of conventional educational organization, is not easy to answer. Here are some typical administrative patterns, and their strengths and weaknesses.

Director Reports to Dean of Instruction. Since off-campus educational experience is a part of the learning process, there is a strong argument for professionals being organizationally aligned with the teaching faculty. The interest and participation of teaching faculty is stimulated if the off-campus personnel are fellow faculty members.

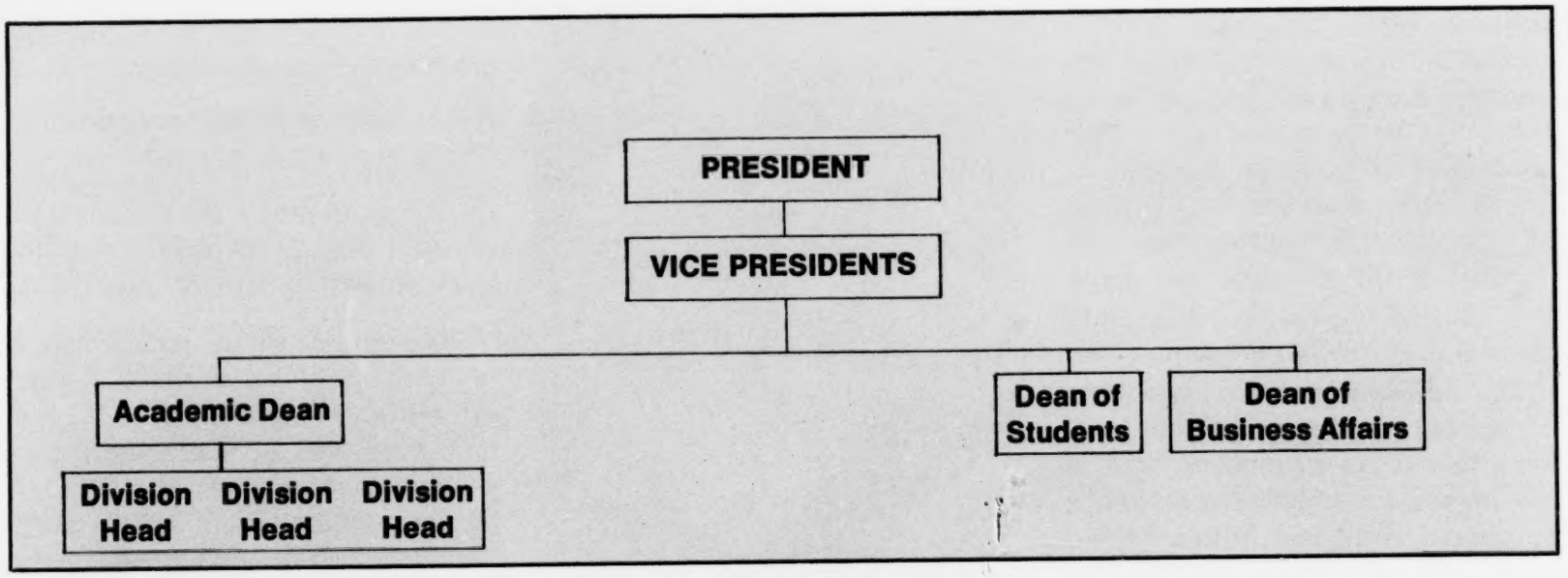
Director Reports to Division/ Department Chairman. In colleges where the program is open to students in only one division, the program sometimes gets lodged there and is budgeted and staffed along with the rest of that division. This can be advantageous because of the close and common purposes of division faculty. However, it has two drawbacks. If it becomes desirable to expand the program into another area of the college, but separatism is insistently maintained, then another, unrelated program must begin somewhere else. In addition, funding can become more of a problem because responsibility for adequate staff and expense funds for a program serving the entire college comes from the top-level administration; whereas, a program within a separate division must be staffed and funded from division resources only.

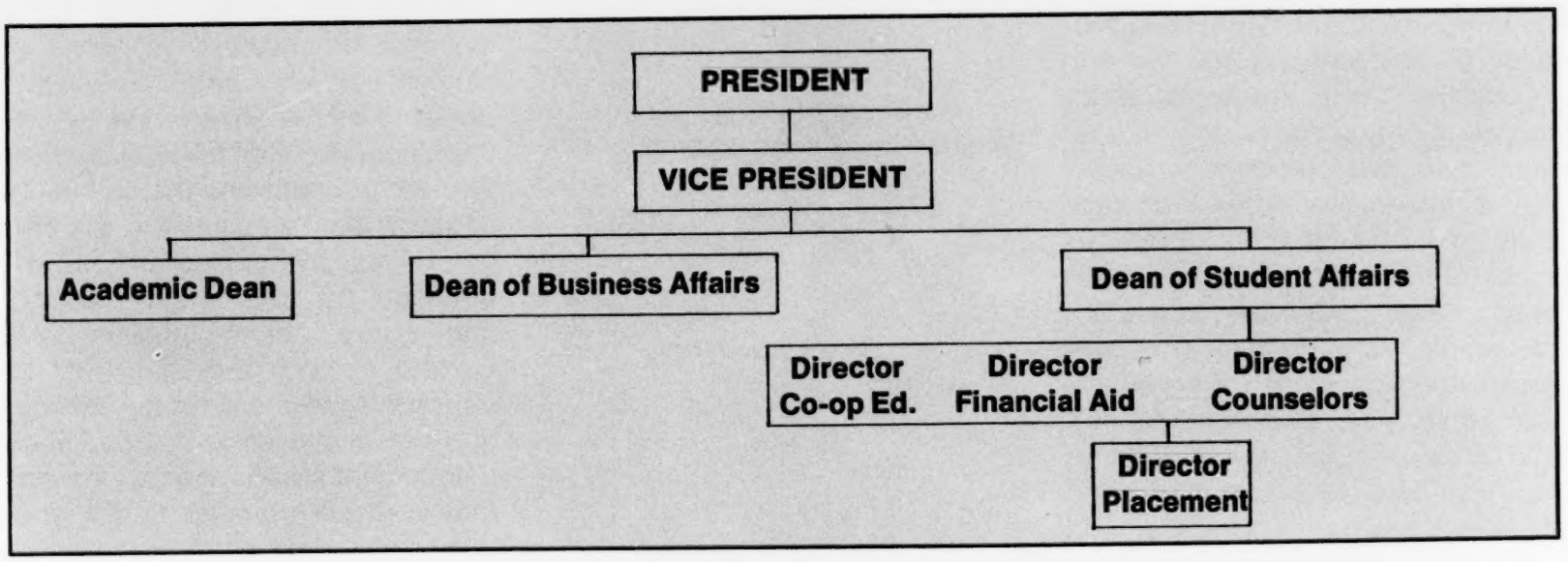
Director Reports to Dean of Student Affairs. This pattern may have particular advantages for the small college because of the relationship of job placement to the organizational structure.

Whatever the organization, there are a few guidelines that deserve consideration. The program should receive the firmest commitment possible from chief administrators both financially and philosophically. All staff involved in the program should be accorded full faculty status. And, though readily apparent, it still bears mention that the program should be situated within the organization in a place where personnel with the interest and dedication to conduct the best possible program will be found.

PROFESSIONAL STAFF

Coordinators are called upon to function as counselors, teachers, placement and public relations specialists, supervisors, and evaluators. In addition, they are expected to be knowledgeable about the world of work, and have had rather comprehensive experiences. It is desirable that people in this field have professional experience in business, government, industry, or social agencies. They must be able to work effectively with people, and be capable of communicat-





ing well with leaders of business, government, and industry. They should possess a firm commitment to the educational concepts of off-campus experience.

It is important that professional coordinators receive some orientation to their duties. Previous work experience in a non-college environment can be a great advantage to the coordinator. A number of training centers have been established for this purpose throughout the country. (The location of these centers can be found in Chapter 8.) Once they are familiar with off-campus education, coordinators should become professionally involved with local and national organizations made up of their counterparts.

Full-time Coordinator. Generally, the full-time coordinator will tend to be more knowledgeable about all aspects of the administration of a co-op program. He is better able to devote all his energies to program development and implementation. His full-time status reduces the number of individuals from the college calling on the employer, and allows the college greater centralization of the program.

Teacher-Coordinator. One of the advantages of the teacher-coordinator is that he will be able to converse with the employer concerning the specific education the student has completed. And, he is in a better position to insure the acceptability of cooperative education by the faculty.

STAFF DUTIES

The normal staff duties of program professionals fall into six categories: job development, counseling, placement, field supervision, evaluation, and record maintenance.

Job Development. The first major function that the coordinator will have to perform will be that of obtaining meaningful positions for students. He must be able to converse with employers. In addition to "selling" employers on the values of cooperative education and soliciting their full cooperation, the coordinator must understand what the experiences are that the employer has to offer and be able to interpret them to students.

Counseling. The counseling process occurs throughout the entire program. The initial counseling sessions determine the student's interests, background, needs, and goals (short-term and long-term), and consider possible work opportunities that will mesh with them. These are followed by on-the-job advising, and post-job conferences (evaluations) which occur after each training period. Perhaps the most significant counseling grows naturally out of the close relationship between the coordinator and the students he serves. Walk-in sessions between the student and his coordinator cover virtually every area of concern: academic, moti-

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vational, and personal. Student problems are probably most frequently discovered through these unscheduled sessions. One of the anomalies of a co-op program is the fact that students may look to the person coordinating their off-campus work program for more support and advice than any other individual at the institution.

The Placement Process. The placement process naturally follows the initial counseling and is the means by which the student's objectives and goals, both personal and emotional, can be fulfilled. The coordinator falls back on his knowledge of business and industry and correlates it with the needs of an individual student. In this placement role, the coordinator generally facilitates the application process in behalf of the student, although this is not necessary all the time. Matters such as contacting the employer, submitting whatever forms are necessary (often this is the employer's own application), and arranging for interviews, are functions that hasten an employer's decision making.

One of the obvious problems in the placement process is to achieve a situation that meets the student's needs while it fulfills the role of the off-campus program at the institution. Since the experience is educationally rather than financially based, some guidelines are useful. Factors which contribute to a positive work experience are listed below:

- The work provides an opportunity to apply classroom knowledge to actual practice and contributes to the understanding of the student's career interests.
- The work contributes to a student's general education and his preparation for his future role in society as a participating citizen.
- The job itself is simple or routine, but the environment contributes to the student's education.
- The work provides an opportunity for exploring a variety of tasks by movement through a number of different departments or assignments.

- The work provides for increasing challenge or responsibility.
- The work provides for opportunities to test career interests.
- The work meets the student's individual objectives (which he has made known to his coordinator).

This enumeration constitutes a philosophy of educational values for the working situation. The list may very well be expanded; and, certainly, it is unlikely that any particular position would satisfy every item listed. In the final analysis, the student and his coordinator must evaluate the position in terms of student needs and objectives, duties to be performed, and the environment in which they will be performed, to determine the suitability of the student's position in the program. Once the desired job has been obtained, the coordinator must try and assure that the position is a continuous one. The signing of an informal agreement by the college and the employer is helpful. Such a document should specify: the college's responsibilities to the employer and student; the employer's responsibilities to the college and student; the number of positions, and in what areas they are found; a salary schedule; some indication that the position(s) is to be filled by rotation, or that only one student will participate; and an agreement that the position(s) will continue at least until those students involved have completed the co-op phase.

Field Supervision. The field supervision process occurs during the visitation cycle in a co-op program. The coordinator should visit his working students a minimum of once per term, and as the need arises. The number of visitations made will naturally be affected by the location of the students and the case-load of the coordinator. Many participating employers are located in other parts of the state or country.

The coordinator should first talk with the employer's representative —this person may very well be someone in the personnel department who has no particular function

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in the process except initially to employ the student. The department head and immediate supervisor of the student should then be contacted. Then, a conference between the coordinators and the student would be in order. It is important to see the supervisor first, for he will be able to relay his observations about the student. With this information in mind, the coordinator will be better able to confer with the student, and counsel him in the most suitable fashion.

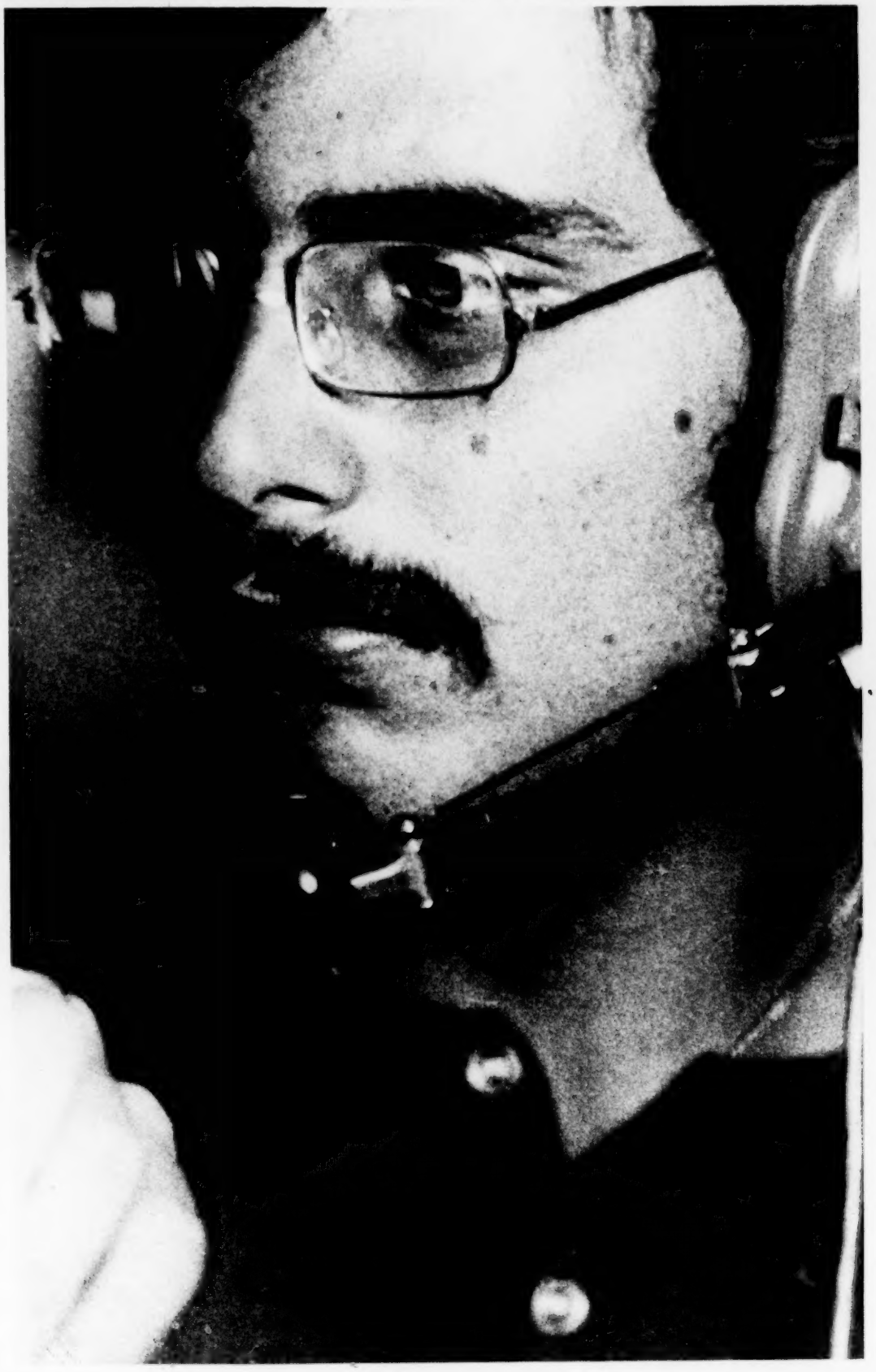
After the coordinator has seen the student, he should communicate the results of his interview to the company officials he spoke with initially. This method of communication will keep everyone aware and the system will turn smoothly. Often, the coordinator can act as a moderator between a dissatisfied, shy student, and a supervisor who is neglectful or unconcerned.

Evaluation. Evaluation should be a regular, on-going process from the very beginning. A good coordinator encourages his students to continually evaluate their experiences. It is standard practice in co-op programs to schedule a series of conferences following each training term. During this planned evaluation process, the student should be asked to take a look at what he has been doing; how he has benefitted from the experience; how his original goals have been met and what other goals have been created; and what weaknesses, strengths, and decisions have become apparent. It is also during this session that a student's academic progress is evaluated, his employer evaluation considered, and other matters relating to his total educational program discussed. After these conferences, grades go into the official transcript, and decisions are made concerning the student's continuation in his present position, transferral to another employer, termination of the program, or referral to other college personnel for special counseling.

Record Keeping. Though it does not affect a student's personal or educational concerns, record keeping is, nevertheless, an important managerial function. It is difficult to suggest a complete system of information retrieval because methods for keeping student records and transcripts vary widely; any record system for cooperative education must be compatible with other systems used within the institution. The types of records that must be kept include student, and employer records.

The school's records ordinarily will include a central file containing personal data and information necessary to record a student's progress in the program, such as employers, dates, grades, evaluations. Students should maintain files including reports, conference proceedings, employer evaluation forms, correspondence, and other pertinent information accumulated during the program. Employer folders will hold a complete record of correspondence, visits, calls, and conferences related to the program.

Sample evaluation charts from W. W. Holding Technical Institute



WORK PERIOD REPORT SHEET

Date .....

Name ..... Course .....
(Last) (First) (Middle Initial)

Work Period Residence Phone ..... Section ..... Yr. of Grad. .....
(Write out exchange name; capitalize dial letters.)

Work Period Residence Address .....
(Number) (Street) (City) (State) (Zip)

Co-op Firm .....
(As shown in the telephone book.)

Address of Co-op Firm .....
(Phone book) (Number) (Street) (City) (State) (Zip)

Plant (if more than one) ..... Co-op Firm Phone .....
(Write out exchange name; capitalize dial letters.)

Name of Supervisor, Department Head, or Foreman } ..... Title .....

Name of Employment Manager .....

Date Began Working This Period ..... Rate of Pay at Beginning of Period .....

Working in ..... Department for ..... Hours per Week
(Identify Dept.—Do not use numbers.)
From ..... A.M. to ..... P.M.

Nature of Work in Detail .....

.....

.....

.....

.....
(Over if necessary.)

Date First Began Duties Described Above .....

Name of Co-op Who Worked on Your Present Job Last Period .....
(Ask your supervisor.)

Check Changes:

Latest Change in Rate of Pay Was from $..... to $..... effective .....

Hours per Week Changed from ..... to ..... effective .....

Supervisor Changed from ..... to .....

Firm: Busier ..... No Change ..... Slower .....

Comments: .....

.....
(Over if necessary.)

EMPLOYER'S EVALUATION OF COOPERATIVE STUDENT

Information, as checked in the spaces below, will assist the Institute in its appraisal of the cooperative work of

_____ Course _____
(Name)

for the work period indicated _____

Employer _____

INSTRUCTIONS: The immediate supervisor will evaluate the student objectively, comparing him with other students of comparable academic level, with other personnel assigned the same or similarly classified jobs, or with individual standards.

RELATIONS WITH OTHERS

- ☐ Exceptionally well accepted
- ☐ Works well with others
- ☐ Gets along satisfactorily
- ☐ Has some difficulty working with others
- ☐ Works very poorly with others

ATTITUDE—APPLICATION TO WORK

- ☐ Outstanding in enthusiasm
- ☐ Very interested and industrious
- ☐ Average in diligence and interest
- ☐ Somewhat indifferent
- ☐ Definitely not interested

JUDGMENT

- ☐ Exceptionally mature
- ☐ Above average in making decisions
- ☐ Usually makes the right decision
- ☐ Often uses poor judgment
- ☐ Consistently uses poor judgment

DEPENDABILITY

- ☐ Completely dependable
- ☐ Above average in dependability
- ☐ Usually dependable
- ☐ Sometimes neglectful or careless
- ☐ Unreliable

ABILITY TO LEARN

- ☐ Learns very quickly
- ☐ Learns readily
- ☐ Average in learning
- ☐ Rather slow to learn
- ☐ Very slow to learn

QUALITY OF WORK

- ☐ Excellent
- ☐ Very good
- ☐ Average
- ☐ Below average
- ☐ Very poor

ATTENDANCE: ☐ Regular ☐ Irregular PUNCTUALITY: ☐ Regular ☐ Irregular

OVER-ALL PERFORMANCE: Outstanding Very Good Average Marginal Unsatisfactory

What traits may help or hinder the student's advancement?

Additional Remarks (over if necessary):

This report has been discussed with student? Yes No

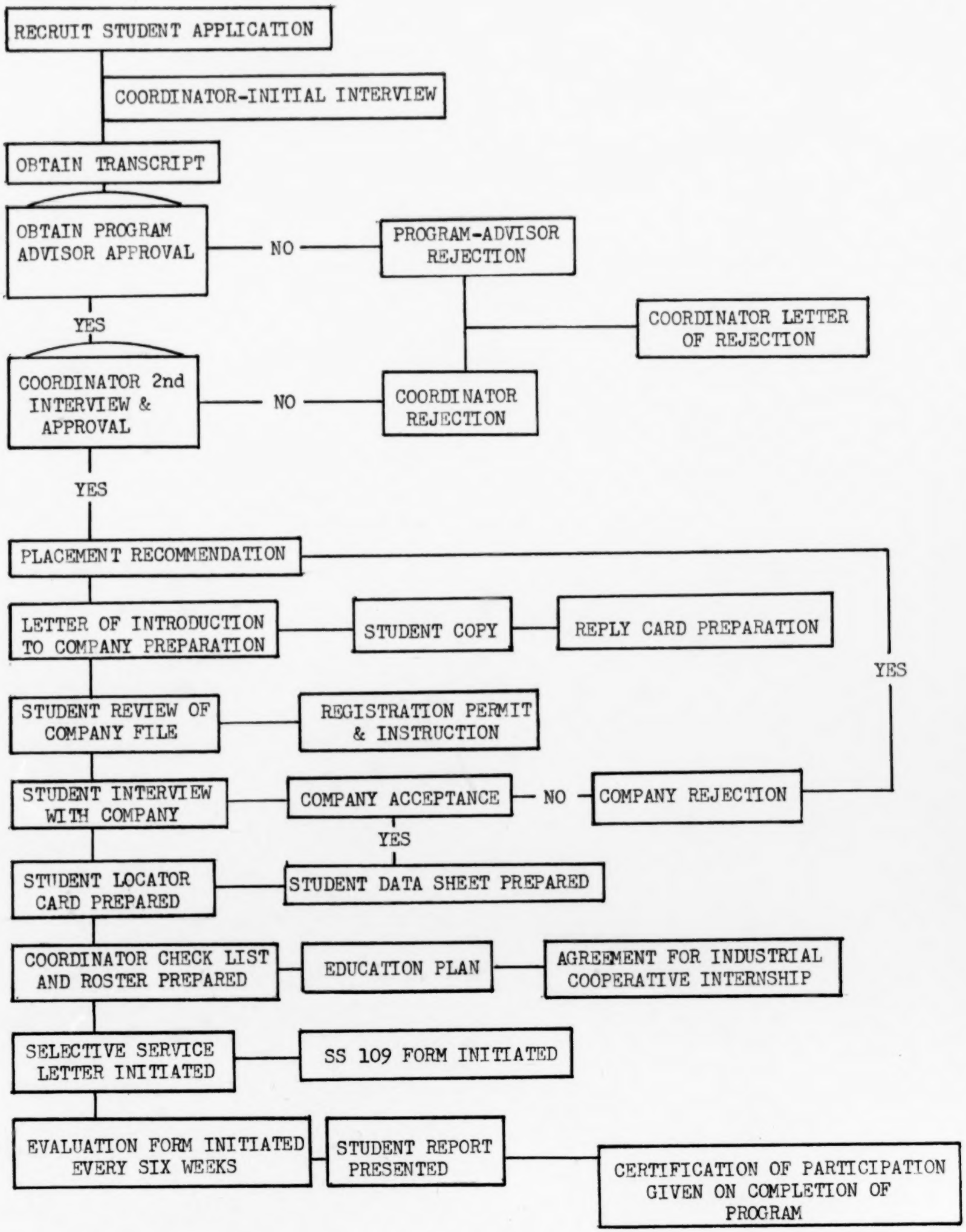
Rated by: _____ _____
(Immediate Supervisor) (Title)

_____ Date _____
(Department)

DEAN OF STUDENTS

Figure 3

FLOW CHART FOR COOPERATIVE EDUCATION



are included, as well as a flow chart (*Figure 3*) giving a comprehensive picture of a complete records program. Every institution engaged in a program would be well advised to develop their own chart so they might see graphically where their efforts are being expended.

PROGRAM ADVISORY COMMITTEES

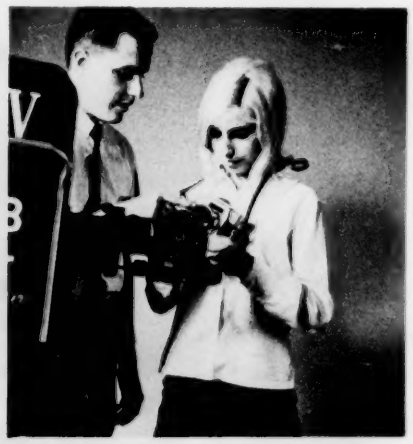
Ever-increasing social and technological developments, and their many byproducts, have made the public aware of the increasing need for education. Technological developments bring occupational change. Many jobs requiring little specialized education are being phased out. New positions call for skills combining applied science, engineering, or business, with a broad social understanding. There is little doubt that the social forces affecting the labor market in our complex society call for advisory committee involvement on a scale heretofore unknown.[3]

The Advisory Committee. From the beginning, this group should be established to act not only in an advisory capacity but also as a front-line in approaching the business and industrial community. Subcommittees representing the major occupational fields should function specifically in their own area, and, sitting together, would constitute an advisory board. Through advisory committees, prospective employers become involved philosophically in the concepts of the program from the very beginning. They recognize the value it has for the college, for students, and for area employers. Employers can be helpful in generating ideas for setting up and supervising on-the-job work periods. Their services may be available to the college from time to time for art work, equipment, and other services.

Each advisory committee should include faculty who serve as *ad hoc* members. This expanded membership will tend to establish a closer working relationship between industry and the institution, and will keep the faculty involved.

The Faculty Committee. As soon as a decision has been made to establish an off-campus program, this commitee should be set up. There are several functions it can serve: It can give advice and strategy for planning curriculum, promote the co-op concept among students, obtain information for student placement, generate ideas about possible employers, and solicit employer support. Faculty will serve a very important role in coordinating on-the-job experiences with the courses they teach. The full support and dedication of the faculty is crucial for a successful program; having them participate from the beginning will assure them they are part of the team.

The Student Committee. This committee should be established as soon as practicable. If students, through promotional activity, learn about the program and become committed to it prior to its inception, a committee might be established from the start to aid in planning, promoting, and implementing. Once the program is in operation, a student committee should be appointed to act as an advisory group to the person in charge. This commitee will provide a means for students to be represented, and a source for beneficial innovations.



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PROGRAM IMPLEMENTATION

5

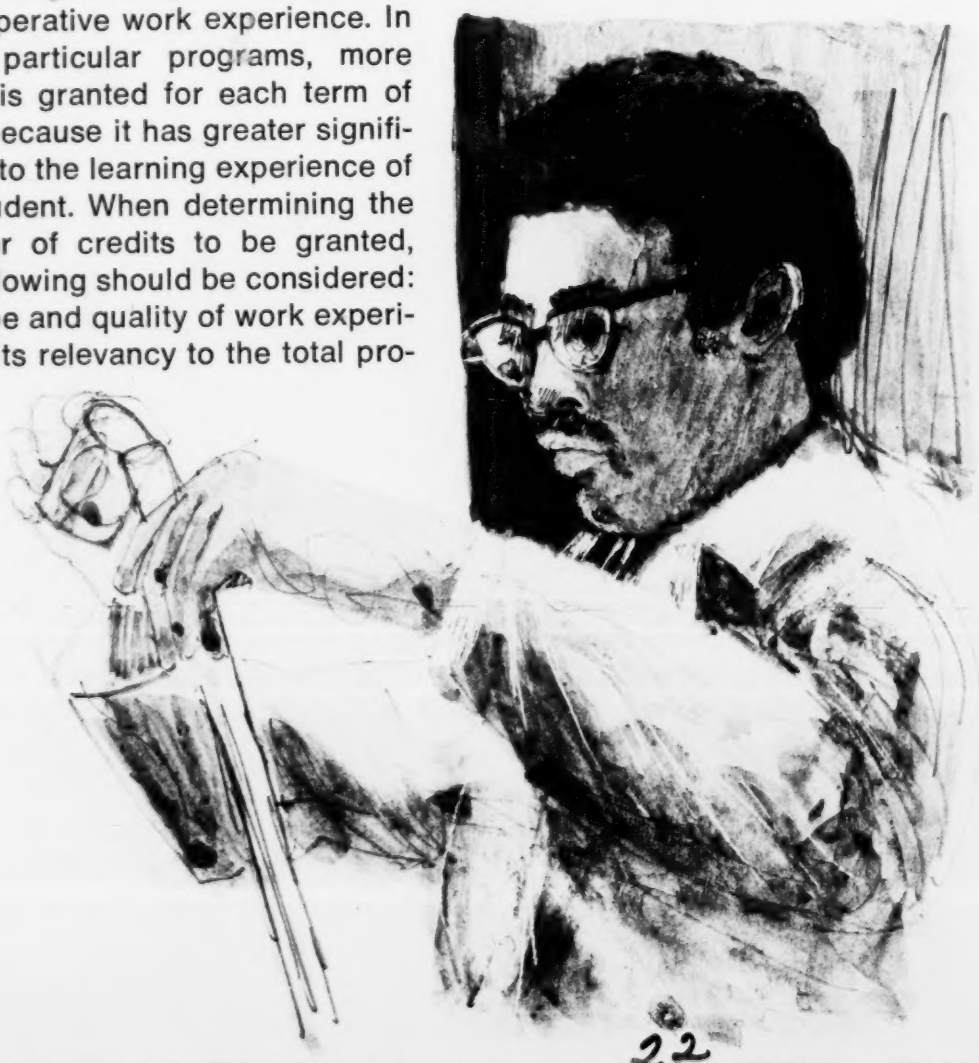
At least two basic policy decisions must be made concerning any new program. To what extent will credit be given for work experience, and will the off-campus program be optional or mandatory?

College credit for work experience should be granted from the beginning of the program. The experience is an extension of the classroom, and by granting academic credit, the institution expresses recognition of its validity. There has been a tradition of granting academic credit for work in areas such as distributive education, mid-management, and other types of off-campus, intern-type jobs. Some states have even published guidelines for tax-supported two-year colleges on how many credits should be granted for such experience. Granting credit provides a cost base both for fees charged the students, and for funding for the program, where tax money is involved and based on full-time, equivalent methods of budgeting.

While practices vary, often a minimum of three or four credit hours are granted for each full term of cooperative work experience. In some particular programs, more credit is granted for each term of work because it has greater significance to the learning experience of the student. When determining the number of credits to be granted, the following should be considered: the type and quality of work experience, its relevancy to the total program, the length of the work term, the number of hours worked per week, and the degree of coordination between the college and the employer.

Should the cooperative education program be mandatory or optional? This is an important decision to be made early in the program planning. The optional program is one to which the student must apply for admittance. He is then accepted or rejected according to the institution's criteria. All students enrolled receive the cooperative experience. The Advisory Committee for this publication believes strongly in the merits of field experience in occupational education. It would seem logical that they would support mandatory work experience in the occupational curriculum. Such a conclusion would be comfortable and tenable, but other factors have a bearing.

One factor which must be considered is the ability of a tax-supported institution to "require" anything of a student beyond what is held to be traditional. Once a college undertakes a "required" program, it is committed to make good the student's opportunity to fulfill that requirement. For example, if a strong program in chemical technology results in a student enrollment too large to provide field experience for all its participants, the school is locked into a crisis. It would have been better had it offered an optional program. One of the best arguments for the optional program is a very practical one: students do not have to participate to graduate and the college is not required to place a student in an appropriate position as a degree requirement.



Other factors also affect the decision about mandatory versus optional programs. If the college is located in a large urban area and the program is going to be locally based (a requirement in a part-time program), then the community's ability to provide the opportunities needed in the program must be considered. One of the advantages of the alternate term plan, where the student alternates on a quarterly or semester basis between his off-campus field experience and the classroom, is the opportunity to have students work many miles from the sponsoring school. This is not as feasible in other co-op plans.

Another factor to consider is the student population itself. Students who are marginal, academically, may be difficult to place in certain fields. Employers of technologists, for example, are likely to be as selective as they are for engineers. A mandatory program places increased responsibilities on the college.

It is probably best to begin a new program on an optional basis with the idea that most students should participate. This will permit the program to develop its strengths as quickly as possible and answer the kinds of questions raised earlier. It does necessitate obtaining a large enough enrollment to make instruction for the classroom share of the program feasible. For if the enrollment is too small, there will not be enough

students in the classroom to make the instruction meaningful. After a year or two of experience, the program should be evaluated to determine whether the conditions, both on campus and off, are right to change the program's status to mandatory.

GRADING

The distribution of credit over a sequence of terms can be broken down after the college determines whether the program will follow a concurrent part-time study and part-time work plan, or an alternation pattern.

If credit is to be given for work experience, criteria must be drawn up and a recording method devised. The most widely used concepts of "passing" require that the student: complete the prescribed work program in a satisfactory way (this is determined by the employer, and reviewed by coordinator and student); complete the required written report concerning the experience; and attend and participate in the conferences about the job. Written reports require the student to describe the duties being performed, how the experience relates to his goals and objectives, and the value of the experience as a whole. Conferences may be one-to-one sessions between the student and his coordinator, group meetings, or a combination of the two.

FEES

Fees to be charged should be consistent with the philosophy of the fee structure of the college.

STUDENT TRANSCRIPT

The transcript should register work and class experience. Oftentimes, students are given special recognition in the form of a certificate of completion, an entry in the transcript, or both. Considering the fact that students are totally involved in a program occupying 12 months each year, and an extended period of preparation, special recognition is certainly appropriate.

CO-OP HANDBOOK

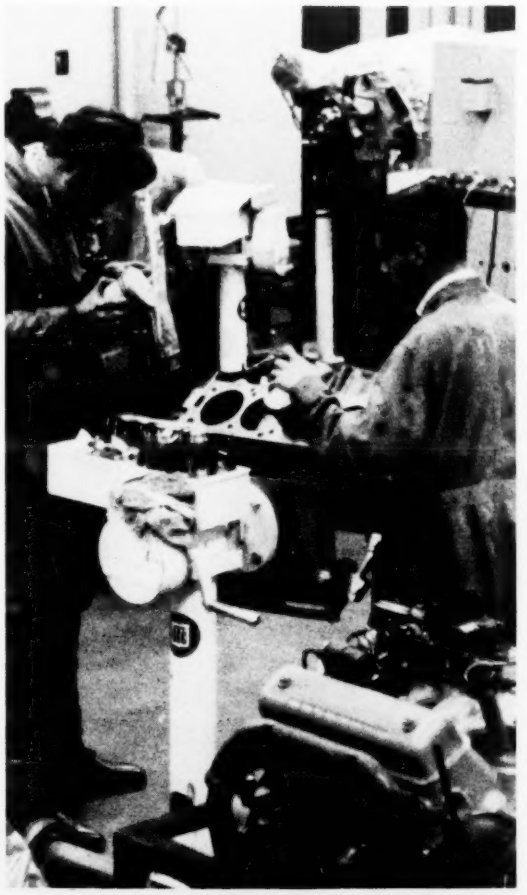
Since off-campus resources will be put into the program, some guidelines should be established concerning college expectations of work performance and conduct. Students must be sensitized to the differences between the "outside" world and the campus. Guidelines will vary from place to place, and no attempt will be made here to define what they could or should include. However, a student handbook should be developed which at least takes in the following: a commitment by the student to the program and the employer; information on how best to relate with supervisors and fellow employees in terms of dress, grooming, conduct, and similar matters; how to interact in an interview; and expectations of the college with regard to performance, reports, and other program matters that the student needs to know how to do well.

Minimum rules should be established so a student will know what is expected of him. They ought to be realistic and modified according to circumstances.

PROGRAM PROMOTION

A major emphasis in cooperative education is communication between the program and all segments of the community, on-campus and off. There are three major sectors that should be informed about the program—students, faculty, and prospective employers off-campus. In addition, the larger community as a whole should be advised. Community-wide promotion will reach area high school students, and is an excellent means of recruitment for the community's two-year institution.

Publications. The college catalog would contain descriptive information about the program, requirements for entry, calendar with illustrations, and other pertinent information. A brochure can be prepared for distribution to all people interested in the program—faculty, prospective students, employers, news media, and the public. This brochure should briefly describe the program, and its benefits to all who actively participate. Sufficient details should be given to clarify how the program is set in motion.



This will include notations about calendar, grading, program management, reports, costs, and other items.

News Promotion: Radio and TV. As events and activities warrant, regular news releases should be prepared for distribution to the news media. In addition, the Public Service Departments of all radio and television stations should be contacted; if their interest can be aroused, special broadcasts describing the program and promoting its support in the local community may be produced.

LOCAL AGENCIES

Youth and Civic Groups. A speakers' bureau should be established, comprised of a select group who would arrange to talk to PTA chapters, teacher-professional societies, youth groups in both schools and churches, civic clubs, business and professional groups, and others. Audio-visual materials could be used, and brochures should be freely distributed.

Chambers of Commerce. The program materials (brochures and catalog) should be submitted to the local Chamber of Commerce to encourage their support for, and participation in the program. Representatives of the Chamber should be invited to attend advisory committee meetings whenever possible. This will tend to keep the Chamber aware of the development and plans of the institution, and should keep the committee and the school aware of new industries contemplating expansion within the immediate locale. It is to the advantage of the school if, when the Chamber reprints a brochure, it includes a reference to existing programs. Business and industrial firms contemplating moving to the area will in this way be alerted to the availability of training for their staff.

OTHER AGENCIES

Veterans Administration and Social Security Administration. The nearest office of the Veterans Administration and the Social Security Administration should be advised of the program as soon as it is approved. Should they have any questions about the program, they will come to the surface early. All brochures, and the college catalog should be sent to both offices.

Selective Service. The Selective Service System recognizes cooperative education. Such programs are approved for a longer period of time than conventional ones. It is important that the State Director of Selective Service be advised of any new operations so that the state office can better advise local Selective Service Boards who might question the length of time participants spend in school. The heads of all local boards should also be contacted to familiarize them with the program and obtain their support.

PROGRAM EVALUATION

Cooperative Education invites immediate and direct measurement of program effectiveness and permits comparison of its goals with those of other modes of instruction. An evaluator can assess student advancement by measuring change in motivation and attitude; retention or drop-out rate; job placement, promotion, retention; and increased awareness and understanding of human relations associated with job performance.

Benefits to the employer are measured by his increased satisfaction with the entry capability of his students, and with their overall job performance.

College and institutional benefits can be measured by assessing increased "benefit to cost" ratio of co-op programs, increased curriculum and program capability (without the concomitant equipment and facility costs to meet the ever-changing technological needs of the community), and improved student-school relations.

PROBLEMS AND POSSIBLE SOLUTIONS

6

IMPORTANCE OF CO-OP ED

Cooperative Education has been listed among the ten most valuable community college innovations in the United States today, according to B. Lamar Johnson, nationally recognized leader of the Junior College Leadership Program, University of California, Los Angeles.

Reporting in *Strategy for Change in the Junior College*[4] he describes an 18-month tour of junior colleges in 22 states. By means of personal visits, conferences, and written reports, more than four out of ten of the public junior colleges in the nation were included in the survey which was undertaken to discover innovative practices.[5] Johnson observes:

> *Cooperative Work Study Education is assuming a role of increasing importance in junior colleges of our nation. This plan is particularly appropriate for the community college. In addition to helping students achieve occupational competence, an important goal of the two-year college, it reemphasizes the [use of] community personnel and facilities in program planning and operation. In addition, the income students receive from employment makes it possible for many of them to attend college.*[6]

SELECTING A COORDINATOR

The individual selected must have the personal and professional qualities needed to organize and administer an effective and ongoing program of cooperative education. He needs to be capable of effective interaction with employers and employees regarding problems arising from the cooperative venture. Students should be his foremost concern. He needs a broad understanding of the institution's policies and programs in order to communicate intelligently both with students and employers.

The coordinator needs an appreciation of the skills needed by the student for successful job performance, and a knowledge of employment practices and policies used by business and industry in the community. He must be aware of union policies and practices in local industries. It will not be practical to employ an individual as coordinator undess he has had the benefit of successful employment and experience. The effective coordinator combines the skills of the counselor, teacher, personnel manager, administrator, and public relations man.

COORDINATION

Since there is not yet in existence a national or regional accreditation system for cooperative education, there are considerable differences found among co-op programs in both two- and four-year colleges concerning the number of students coordinators will handle. Two major pressures are brought to bear in this important matter. One is the pressure by the administration to keep costs down; the other is the pressure on the institution to implement educational objectives, and obtain and retain competent faculty with workloads that are reasonable.

It is extremely difficult to try to establish minimum or maximum caseloads for full-time coordinators. There are successful programs being conducted with ratios of 80-1, 125-1, and even 200-1. However, various criteria must be considered in establishing student loads for each coordinator. Some of these are:

1. *Calendar In Use at the College.* Regardless of the time available, certain necessary tasks must be accomplished each term. In a semester with 16 weeks, more students can be supervised by one coordinator than in a quarter system with only 11 weeks.

2. *Alternating System versus Concurrent System.* In an alternation system, half the students are off campus and half are on campus. Thus, field visits involve only half the coordinator's total students. Conversely, counseling sessions on campus involve only half the total students. Thus, more students can be managed in the alternating system than in a concurrent system where every student is visited on the job each term, and counseled in the office each term as well, because he is engaged in both activities at the same time.

3. *Local Placements versus Distant Placements and Field Visits.* A major factor is the frequency with which students are visited on the job while off-campus. Where students are placed in positions more than 50 miles from campus, field

visits will probably be limited to once each term because of financial and time considerations. Where student placements are limited to the immediate college community, visits can be more frequent, take less time and money. In concurrent programs where the student is engaged both in his field experience and classroom studies, each on a part-time basis, placements must be local. In alternating programs, students can be assigned as far away as necessary to provide the most valuable experience.

4. *Staff Support Provided.* A program director should have the services of a full-time secretary and one secretary should be available for every two coordinators. Clerical assistance for record keeping of any magnitude should be in addition to the secretarial assistance and must be determined by the college in relation to the record system established. Any less staff support with have a bearing on the student load because the coordinators will be required to perform functions which would otherwise be fulfilled by supporting staff.

In a concurrent system, student loads must be substantially reduced because the same student is receiving all the same services (on- and off-campus), as students on an alternating system receive. However, there are other factors which affect student load in the concurrent system. The time of each on-the-job visit can be reduced because there is less travel involved; some schools with only local programs visit their students more than once each term, so visitation time is augmented.

EVALUATING EXPERIENCE

Effective evaluation of on-the-job experience is essential, especially when academic credit is being earned. Coordinators usually rely heavily on the reports of employers and students. With the assistance of the foreman or supervisor, the coordinator can usually determine the employers' feelings about the quality of the work being performed. Likewise, the student can provide a picture of learning opportunities available to him through consultation with his coordinator. Having regularly observed his student in the working environment, a coordinator can easily combine his reports with his own perceptions, and assess the value of the experience.

MORE DROPOUTS?

Co-op education tends to increase student retention. The San Mateo College pilot program supported by the Ford Foundation, reported many cases of potential dropouts who changed to the co-operative plan, and stayed in school.

The enlarged termination and early dropout rate is one of the major concerns of community college educators. The number of two-year completions, as compared with the number who enroll in two-

Figure 4

Cooperative Education

Employer Evaluation of Student On-The-Job Performance

(N = 214 student evaluations)

		5.00 scale		
RELATIONS WITH OTHERS	Exceptionally well accepted	4.22	34%	———
	Works well with others		56%	———
	Gets along satisfactorily		9%	——
	Difficulty working with others		1%	–
	Works very poorly with others		——	
JUDGMENT	Exceptionally mature	3.79	21%	———
	Above average in making deci s		37%	———
	Usually makes the right decis		41%	———
	Often uses poor judgment		1%	–
	Consistently uses bad judgment		——	
ABILITY TO LEARN	Learns very quickly	4.24	41%	———
	Learns rapidly		42%	———
	Average in learning		16%	——
	Rather slow to learn		1%	–
	Very slow to learn		——	
ATTITUDE APPLICATION TO WORK	Outstanding in enthusiasm	4.00	23%	———
	Very interested and industrious		57%	———
	Average in diligence and interest		17%	——
	Somewhat indifferent		2%	—
	Definitely not interested		1%	–
DEPENDABILITY	Completely dependable	4.18	43%	———
	Above average in dependability		33%	———
	Usually dependable		21%	———
	Sometimes neglectful or careless		2%	—
	Unreliable		——	
QUALITY OF WORK	Excellent	4.21	35%	———
	Very good		51%	———
	Average		14%	——
	Below average		——	
	Very poor		——	
OVERALL RATING	Excellent	4.10	34%	———
	Very good		53%	———
	Average		11%	——
	Marginal		1%	–
	Poor		——	
ATTENDANCE	Regular		97%	———
	Irregular		3%	—
PUNCTUALITY	Regular		97%	———
	Irregular		3%	—

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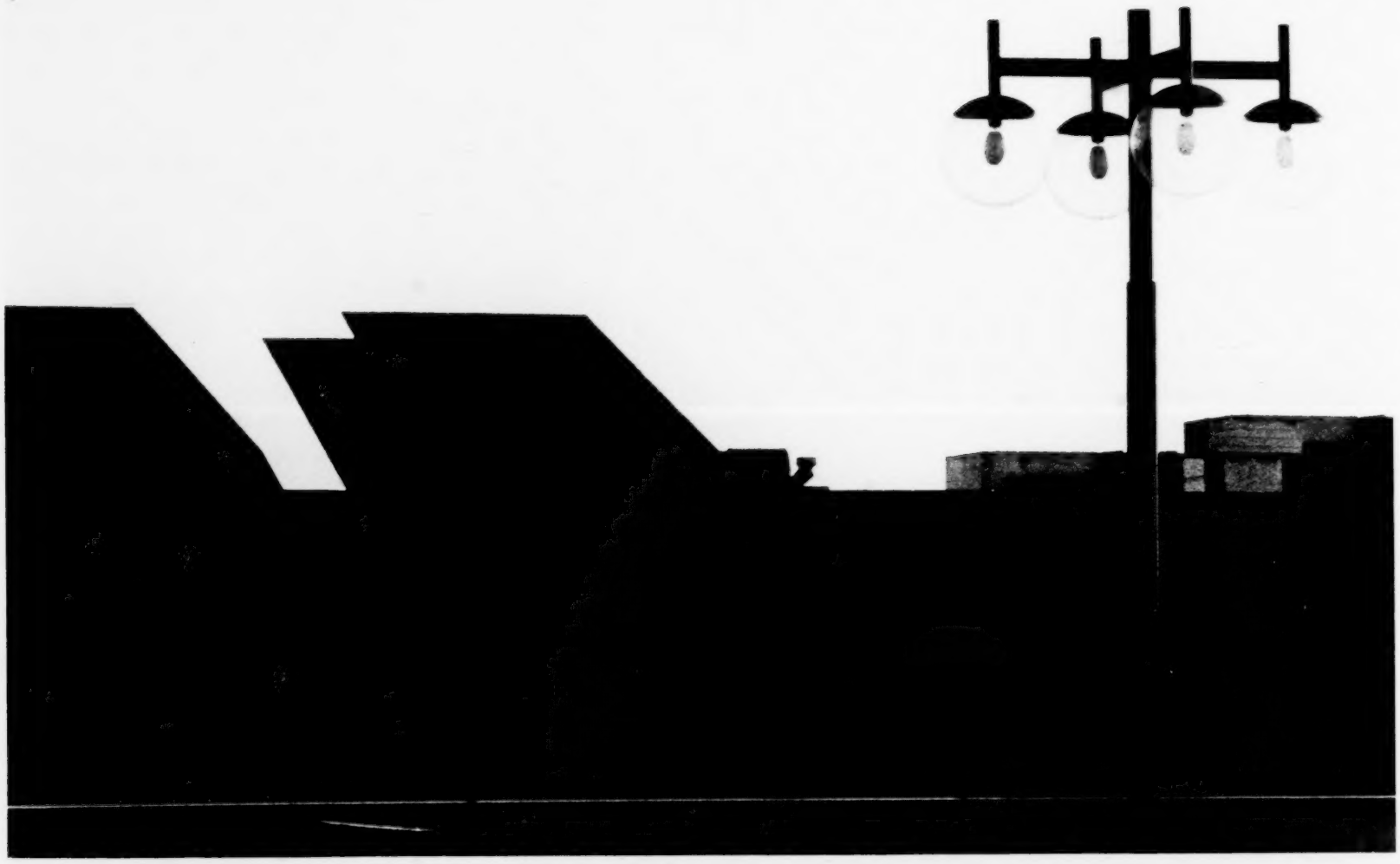

year college programs, is not as high as would be expected. There are many valid reasons for student non-completion of programs. The fact remains that major efforts of the community college, particularly in occupational programs, are set up around a two-year period of time, and large numbers do not complete the full period.

MATCHING STUDENTS, JOBS

Early in the developmental process, the new coordinator learns that there are more jobs available than can be filled; and surprisingly enough, at the same time, there are more students desiring jobs than can be placed. Industrial personnel workers and employment counselors have been aware of this problem as long as they have been in business. For the cooperative education coordinator new to the task, however, it may come as a shock to have both students and employers unhappy over unfilled positions.

One solution that appears to have merit is the use of cumulative record cards with visible data for quick reference. Separate color coding for employers and students allows a quick matching of student skills with employment needs. Filing of these cards in a special "tub" with racks for sorting by divisions has proven to be a time-saving procedure.

Illustration of this visible sorting arrangement is shown in *Figure 4*. Note that the employer and student cards provide a slightly different kind of data on the visible edges to allow the coordinator to weed out students by categories, and employers by area and function.

WINNING OVER THE MANAGER

How do you "sell" the personnel manager or coordinator whose firm or school is committed to cooperative education, but he, as an individual is not? Generally speaking, this would only be a temporary situation for the committed academic institution. Since the coordinator must be the leading and driving force for a totally successful program, the uncommitted coordinator and unsuccessful program would quickly be apparent to every one involved in the program. The student and the employer would have the responsibility of bringing this situation to the school administrator's attention.

But what happens when the employer-coordinator is not a devotee of the advantages of cooperative education and work experience? Is it easily determinable and changeable? Probably not. Business or industry may, at the top management level, be thoroughly in favor of cooperative education, but the individual directly involved may be cold to the concept.

Only as a last resort should top management be informed. The best solution is for the college coordinator to do his best to "sell" the performance. Flood the disbeliever with top candidates, with good on-the-job performances, and the best coordination. It will not take many successful work periods to bring around the hard-core disbelievers.

POTENTIAL FOR THE FUTURE

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Educationally, the cooperative concept has passed the test of effectiveness. It now stands ready for more extensive implementation. The two-year community institutions are well suited for the task.

Changes in cooperative education over the next ten-year period are most apt to occur in two ways. Improved techniques no doubt will be developed by the colleges to provide more effective classroom instruction; and equally as important, new methods for involving college students in community development can be predicted for coordinated field experience.

NEW METHODS OF INSTRUCTION

On- and off-campus programs will be influenced to a great extent by modern technology and the need for more personalized instruction. "Coordinated instruction systems" is one term that has been used to identify new educational processes being introduced. Coordinated instruction for co-op students no doubt will include television, computers, single-concept film loops, automated slide-tapes, and programmed instruction under the coordination and evaluation of professional teachers.

One can visualize an innovative system featuring high quality lecture and demonstration, personalized instruction through seminars and tutoring, multiple learning activities, and flexible scheduling arrangements. Television, recognized as the most fully developed and powerful modern technical instrument for the dissemination of information, transmits many of the major lectures and demonstrations and is programmed for repeat showings. Students are able to view these on campus or at home, with options for multiple viewing. Support instruction for each major lecture or demonstration is provided through single-concept film loops and automated slide-type productions available on campus at any time of day or evening for individuals or small groups. Instructors work more directly with students than in traditional systems. Seminars, individual tutoring, small group laboratory sessions, and telephone conversations during office hours are standard procedure. Written assignments include work with programmed instruction materials. Students and teachers have a new feeling of greater personal interaction with more emphasis on individualized instruction.

Highly flexible coordinated instruction systems that would allow students to enter at any time of the year might be developed for two-year institutions. They enroll and complete individual courses either concurrently or one after another in series. Students in traditional college schedules who have lost a full semester of class credit for leaving before final examinations could, under the new systems, complete a full-planned program of courses before leaving.

For these cooperative education students who learn best by concentrating on one course at a time, it is possible to go through a series of courses in succession. Others for various reasons work on groups of courses concurrently, terminating study upon completion of the subject material and without regard for semester opening and closing dates. Instructors, freed from repititious daily schedules, are available for direct assistance to individuals and small groups of students working at different rates of progress.

Increased flexibility of the educational process enhances both classroom study and field experience for community college cooperative education students.

CAREER-STEP SYSTEM

Employers are beginning to discover that the community two-year institutions are destined to be the largest manpower pool of young workers with potential capability for advancement to professional and semi-professional supervision and management positions. As the community college movement gains momentum, this prediction no doubt will become even more apparent.

Expert opinion on work patterns indicates that at least 75 per cent of the employers in the future will need postsecondary education. Five or more semi-professionals will be required to work with each professional. The programs of community college cooperative education should plan to reflect this pattern of development.

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Career-Step System—a concept design developed to focus on this employment pattern of the future—would place cooperative education in a leading position to meet the needs of students and employers. This concept is based upon student enrollment in general studies with concurrent, direct career preparation throughout the full period of time in college. Options include advancement and re-entry, off-campus experience, and combinations of learning systems. Community college studies are placed in a progressing career relationship to upper division and graduate studies. Students may move directly through college with no interruption, or they may leave and re-enter in a variety of options.

The majority of college students, including those who are married, veterans, disadvantaged, underachieving, or undecided, can improve progress in an open-ended, flexible system of this kind with advancement and re-entry options.

Whether a cooperative education student's stated goals are professional or not, he continually builds skills for intermediate and advanced career goals. Those who leave the Career-Step System for any reason have achieved a level of competence for employment and have the chance to re-enter at a later time.

Coordinated instruction as a part of the Career-Step System uses the resources of television, automated instruction, computer-assisted instruction, team teaching, and differentiated staff utilization under the direction of professional teachers to provide flexibility and allow more students to complete college.

Cooperative work experience serves as an integral part of instructional programs in the Career-Step System providing students the benefits of early involvement in careers, rapid advancement, personal responsibility, financial security, and career choice options based upon personal experience.

NEW FIELD EXPERIENCES

Federal funding sources in the future may lead to new kinds of cooperative education service for those who are unemployed and disadvantaged. Community colleges in the near future may serve as the critical educational link in the process of retraining and upgrading of unskilled and semi-skilled workers. Cooperative education might be the most logical educational system to interrelate with such programs as Manpower Training, New Careers, Vocational Education, WIN (Work Incentive), Allied Health and Off-Campus College Work Study. Each of these programs could easily adopt the cooperative education concept in conjunction with the two-year institutions' occupational curricula to provide more effective programs in each area.

"OUTREACH" SYSTEMS

A young man of Mexican-American heritage, speaking as a student advisor in a "tell-it-how-it-is" session with a group of administrators and faculty at Cañada College in November of 1969, spoke of the need for community understanding of disadvantaged-student problems. He referred to a recent television broadcast series in Spanish which was watched by the Mexican-American community with keen interest.

Several factors were important to him. This was, as he observed, a significant breakthrough to getting information directly into the homes of large numbers of Mexican-American students and their families. From his viewpoint, it was important that the Spanish language was used to deliver the information. The main reason the program was of widespread interest was the sense of pride generated in viewing on public television a class taught in Spanish by a Mexican-American teacher for this special audience. It was his belief that here was an unusually effective educational experience.

As a result of this and other examples of the potential power of television to serve as an "outreach" system for bringing relevant community college education to disadvantaged youth, a correlated phase of cooperative education programs will be developed using television as an instructional instrument. These activities will be a direct part of the total effort of the cooperative education programs and should provide greatly expanded services to college students in future years.

INTERNATIONAL INVOLVEMENT

There are a number of institutions experimenting with some international concepts in cooperative education.

One mid-Western college is establishing a program whereby a young retail-marketing student would spend the work period with one of the world's top furriers in Paris. Imagine the techniques and secrets of one of the world's top fashion suppliers as a co-op experience.

Would your students like to learn first-hand the hotel business by having a co-op work experience in the top Canadian hotels from Vancouver through Baniff and Japan to Nova Scotia? This, too, is now possible in cooperative education.

Imagine putting the finishing touches on an understanding of international trade by touring industries and businesses in the European Common Market countries for eight weeks of *work* with your classroom instructor as director.

Cooperative education is on the move—have your institution join the relevant educational program!

SOURCES OF ASSISTANCE

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REGISTRATION AND SUPPORT

National Commission for
Cooperative Education
52 Vanderbilt Avenue
New York, New York 10017

This national organization is supported by foundation money to promote cooperative programs in higher education. All colleges should list their programs with this agency in order to appear in the list published several times each year. The Commission has funds available to send a consultant into the field to assist institutions, on a limited basis, with the establishment of new programs.

Cooperative Education Association
Drexel Institute of Technology
32nd and Chestnut Streets
Philadelphia, Pennsylvania 19104

A national professional association for educators and employers of students in every level of cooperative education programs, this organization is broadly based, representing every conceivable kind of program in every major college curriculum. The CEA publishes the *Journal of Cooperative Education* two to four times a year, as well as a quarterly newsletter. The annual meeting of CEA is held in January, and workshops designed especially for two-year colleges are held at each meeting. Through active participation in CEA member colleges exchange information and ideas and have access to experts in the field who offer advice and assistance. Membership costs are moderate and information may be obtained by writing to the Executive Secretary at the above address.

Cooperative Education Division
American Society for Engineering
Education
One Dupont Circle
Washington, D.C. 20036

This division is closely affiliated with CEA and is strongly supported by cooperative programs in engineering. Institutions with programs in technical areas should belong to both CEA and CED. Membership in CED is provided as an option to members of ASEE. Write to the Executive Secretary, ASEE, to obtain more information.

CO-OP TRAINING CENTERS

Training centers for cooperative education are in operation at various places throughout the country. For a nominal fee, these centers provide three-to-five day workshops to train personnel new to the cooperative education concept. Other workshops are designed for experienced program coordinators and directors. There may be as many as four workshops a year. Additional information can be obtained by writing to the directors of the following centers:

Southeastern Center for
Cooperative Education
University of South Florida
Tampa, Florida 33618

Center for Cooperative Education
Northeastern University
Boston, Massachusetts 02115

Center for Cooperative Education
Virginia Polytechnic Institute
Blacksburg, Virginia 24061

Periodically, through special grants and for special purposes, workshops are held that last from one week to one month.

OTHER COLLEGES

Over 150 colleges and universities have on-going cooperative education programs. These established schools are happy to lend whatever assistance they can to a nearby institution beginning an off-campus program. The type of relationship possible is suggested in a recent publication.[7] To obtain a current listing of schools with co-op programs, or to learn of schools nearby who can help, write to the National Commission for Cooperative Education, or the Cooperative Education Association.

The American Association of Junior Colleges will be able to refer consultants to institutions who want help with beginning or expanding cooperative education programs.

BOOKS, PERIODICALS

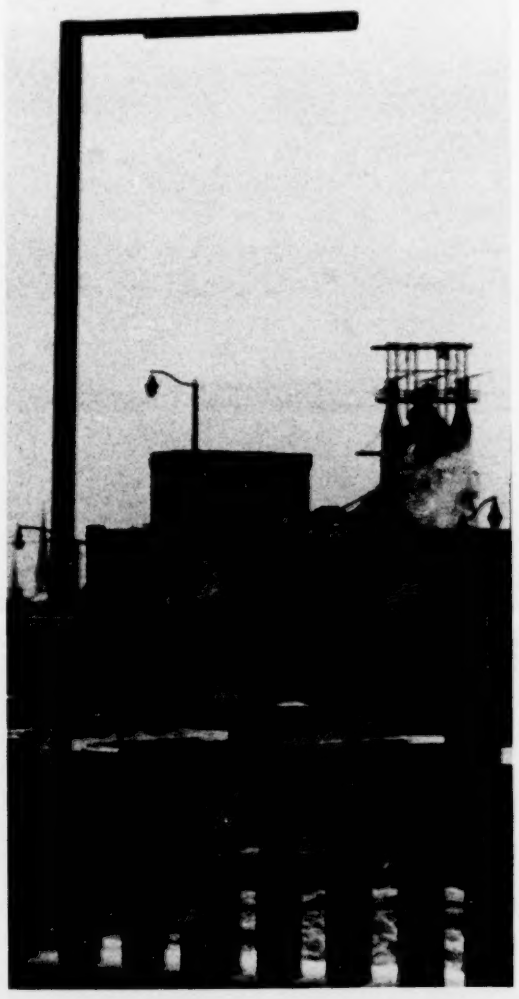
The only periodical serving the cooperative community is the *Journal of Cooperative Education*, published by the Cooperative Education Association. The *Journal* is provided free of charge to members. Subscriptions may also be obtained by writing that Association.

Three books have served as "classics" in cooperative education in terms of history, philosophy, and values. Though these books are out of print, some copies are available at the locations noted below.

Antioch College, by Algo D. Henderson and Dorothy Hall. Publisher: Harper and Brothers, 1946. Purchase from Antioch College Bookstore, Yellow Springs, Ohio 45387.

Work Study College Programs by James W. Wilson and Edward H. Lyons. Publisher: Harper and Brothers, 1961. Purchase from Northeastern University Bookstore, Boston, Massachusetts 02115.

Ambassador to Industry, by Clyde W. Park. Publisher: Bobbs-Merrill, 1943. Purchase from University of Cincinnati Bookstore, Cincinnati, Ohio.



NON-BACCALAUREATE PROGRAMS

Abraham Baldwin Agricultural College, Tifton, Georgia

Agricultural and Technical College at Alfred, New York

Agricultural and Technical College at Morrisville, New York

Alice Lloyd College (Kentucky Highlands Co-op Education Program), Pippa Passes, Kentucky

Bronx Community College, Bronx, New York

Broome Technical Community College, Binghamton, New York

Broward Junior College, Ft. Lauderdale, Florida

Cañada College, Redwood City, California

Central Connecticut State College, New Britain, Connecticut

Cerritos College, Norwalk, California

Chabot College, Hayward, California

Chicago City Colleges, Loop, Chicago, Illinois

Chaffey College, Alta Loma, California

Cincinnati Technical Institute, Cincinnati, Ohio

College of Marin, Kentfield, California

College of San Mateo, San Mateo, California

Cuyahoga Community College, Cleveland, Ohio

Delta College, University Center, Michigan

Fashion Institute of Technology, New York, New York

Fresno City College, Fresno, California

Fullerton Junior College, Fullerton, California

Gadsden State Junior College, Gadsden, Alabama

Golden West College, Huntington Beach, California

Grahm Junior College, Boston, Massachusetts

Grossmont College, El Cajon, California

Henry Ford Community College, Dearborn, Michigan

Hillsborough Junior College, Tampa, Florida

W. W. Holding Technical Institute, Raleigh, North Carolina

Indiana Northern University,* Gary, Indiana

Iowa State University,* Ames, Iowa

Lane Community College, Eugene, Oregon

Lees Junior College (Kentucky Highlands Co-op Education Program) Jackson, Kentucky

Long Beach City College, Long Beach, California

Los Angeles City College, Los Angeles, California

Los Angeles Harbor College, Wilmington, California

Los Angeles Pierce College, Woodland Hills, California

Los Angeles Trade-Technical College, Los Angeles, California

Los Angeles Valley College, Van Nuys, California

Macomb County Community College, Warren, Michigan

Manatee Junior College, Bradenton, Florida

Borough of Manhattan Community College, New York, New York

Maricopa Technical College, Phoenix, Arizona

Mary Holmes College, West Point, Mississippi

Miami-Dade Junior College, Miami, Florida

Mohawk College of Applied Arts and Technology, Hamilton, Ontario

Mohawk Valley Community College, Utica, New York

Monroe Community College, Rochester, New York

Moorpark College, Moorpark, California

Mt. San Antonio College, Walnut, California

Nassau Community College, Garden City, New York

New York City Community College, New York, New York

Northeastern University,* Boston, Massachusetts

Northwood Institute of Midland,* Midland, Michigan

Ohio College of Applied Science, Cincinnati, Ohio

Orange Coast College, Costa Mesa, California

Pasadena City College, Pasadena, California

Pensacola Junior College, Pensacola, Florida

Phoenix College, Phoenix, Arizona

Purdue University,* Indianapolis, Indiana

Rock Valley College, Rockford, Illinois

Roger Williams College, Providence, Rhode Isand

Rutgers University,* New Brunswick, New Jersey

Sacramento City College, Sacramento, California

San Bernardino Valley College, San Bernardino, California

San Diego Junior College, San Diego, California

Santa Monica City College, Santa Monica, California

Sinclair Community College, Dayton, Ohio

Skyline College, San Bruno, California

Temple University Technical Institute, Philadelphia, Pennsylvania

Texas A and M University,* College Station, Texas

Tri State College,* Angola, Indiana

Wesleyan University, Middletown, Connecticut

West Virginia Institute of Technology, Montgomery, West Virginia

Worcester Industrial Technical Institute, Worcester, Massachusetts

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* Also offer baccalaureate or higher degree programs

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FOOTNOTES

[1] Lupton, D. Keith. "Campus Stretching through Cooperative Education." *Junior College Journal* 40: 37-39; February 1970.

[2] Wilson, James W. and Lyons, Edward H. *Work Study College Programs.* New York, New York: Harper and Row, 1961.

[3] Riendeau, Albert J. *The Role of the Advisory Committee in Occupational Education in the Junior College.* American Association of Junior Colleges, 1967. 75pp.

[4] Program with Developing Institutions, AAJC. *Strategy for Change in the Junior College.* Selected Proceedings of the Second National Conference, Vincennes University, Indiana, June 15-18, 1969. Publication number 8, September 1969.

[5] Johnson, B. Lamar. "Islands of Innovation." Occasional Report Number 6, UCLA Junior College Leadership Program. School of Education, University of California, Los Angeles, California, 1964.

[6] *Ibid. Islands of Innovation Expanding: Changes in the Community College.* Beverly Hills, California: Glencoe Press, 1969.

[7] Lupton, D. Keith and Wadsworth, R. B. "Junior College Co-op: Partnership and Practice." *Journal of Cooperative Education* 5: 50-57; May 1969.

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